

The Classification of Butterflies *

States and Canada have antennae which are not club-shaped, but are of various other forms. Some moths have thread-like antennae tapering to a fine point; others have feather-shaped antennae; others still have antennae which are prismatic in form, and provided with

FIG. 77.—Antennas of moths.



a little hook, or spur, at the end; and there are many modifications of these forms. The club-shaped form of the antennae of butterflies has led naturalists to call them *Rhopaiocera*, as has been already explained in speaking of this subject on page 17. Moths are called *Heterocera*. The word *Heterocera* is compounded of the Greek word *hetero* (hetero), meaning *other*, and the Greek word *xpas* (*keras*), meaning a *horn*. They are lepidoptera which have antennae which are *other than club-shaped*. Besides the distinctions which exist in the matter of the form of the antennae, there are distinctions in the veins of the wings, and in the manner of carrying them when at rest or in flight, which are quite characteristic of the two groups; but all of these things the attentive student will quickly learn for himself by observation.

Scientific Arrangement.— Having thus cast a passing glance at the differences which exist between moths and butterflies, we take up the question of the subdivision of the butterflies into natural groups; Various systems of arranging butterflies have been suggested from time to time by learned writers, and for a knowledge of these systems the student may consult works which treat of them at length. It is sufficient for beginners, for whom this book is principally written, to observe that in modern science, for purposes of convenience, as well as for

regard for

essential truth, all individuals **s** are looked upon as belonging to a *species*. A species includes all those individuals, which have a common ancestry, and are so related in form and structure as to be manifestly separable from all other similarly constituted assemblages of individuals. For instance, all the large cats having a tawny skin, and in the male a shaggy mane, constitute a species, which we call the lion **n**; the eagles in the eastern United States,